## REMARKS

The official action and the cited references have again been reviewed in depth. The review indicates that the claims, especially as amended, recite patentable subject matter and should be allowed. Reconsideration and allowance are therefore respectfully requested.

The claims as presently recited in amended form better distinguish between the protective layer (a feature of the prior art of Roche et al.) and applicants' innovation of the protective shield layer having a requisite thickness range of 2-8mil, by use of inserting the phrase "further comprising" to make it clearer that the superior corrosion resistant and ultra violet-resistant protective shield layer constitutes a patentable advance over the mere protective layer of the prior art.

FIGS. A and B of the submitted Affidavit is consistent with the graph of FIG. 4 in establishing superior and unexpectant results over the Silverlux corrosion-resistant silver mirror construction of Roche et al that disclose only a protective layer. That is, the invention silver mirror (which retains specular optical efficiency and clarity throughout the UV and visible spectrum in a solar reflector) is inventive over the silver mirror construction and process for making the same in Roche et al. alone or Roche et al. in view of Schissel et al., further in view of Sugisaki et al.

For background, it should be known that in the use of silver mirrors in solar reflectors, wherein silver is substantially higher in reflectivity than other metals, and wherein specular reflectance over time is impared due to abrasion, weathering, and ultraviolet degradation, applicants are the first to invent a silver mirror for use in solar reflectors, in which: the measured

spectral hemispherical reflectance is retained with high optical clarity through the UV and visible spectrum at near 100% reflectance where superior durability of solar weighted hemispherical reflectance % is beyond 5 years (Affidavit, FIG. A); and resistance to moisture induced delamination exceeds 60 days (Affidavit FIG. B).

The silver mirror of the invention is made by:

(a) providing a polymeric substrate;

(b) bonding a specular-reflective silver layer to said polymeric substrate;

(c) bonding a protective layer of a transparent-film forming polymer to said silver layer; and

(d) adhering a protective shield layer to an exposed surface of said protective layer or to an adhesive layer on said protective layer that is highly optically transmissible to visible, ultraviolet, and near infrared; said protective shield layer comprising a transparent multipolymer film of a thickness range of 2-8 mil on the protective layer.

Roche et al. '714 imparts corrosion resistance to silver mirrors by vapor depositing silver on a polyester film and protectively covering it with a coating of transparent acrylate polymer containing a silver corrosion inhibitor such as glycol dimercaptoacetate. Upon employing a pressure-sensitive adhesive on the opposite face of the polyester film, degradation of the polyester and consequent bubbling of the adhesive is reduced or eliminated by incorporating a UV absorber in a second polymer layer covering the protective transparent acrylate polymer layer.

The silver mirror structure of applicants, as shown by results in FIG. A in the Affidavit and the plot of FIG. 4, retains solar weighted hemispherical reflectance of close to 100% beyond 5 years compared to the conventional Silverlux silver mirror of Roche et al., which drops off precipitously at about 2 years.

Applicants' specification from page 6, line 17 to page 7, line 13, shows that reference

numeral 26 of FIG. 2 is the conventional Silverlux mirror of Roche et al., and that layer 17 having a thickness from 2-8 mils is the transparent multi-polymer film incorporating the UV absorber that is applicants' innovation (which is affixed to the base Silverlux mirror of Roche et al.).

There is no reference to or mention of, the need for a second protective layer of a transparent multipolymer film affixed to its mirror in Roche et al., let alone a second or protective shield layer of a transparent multipolymer film having a thickness of 2-8 mils.

Schissel et al. merely disclose metallized polymer mirror constructions of improved durability by virtue of having an oxide layer interposed between an outer layer of polymeric material and the reflective layer of silver, wherein the oxide acts as an adhesive layer to impede initiation of delamination as well as tunneling when delamination occurs. If the oxide layer of Schissel et al. (which acts as an adhesive layer), is interposed between the outer layer polymeric material and the reflective layer of silver in Roche et al., applicants' invention as presently recited would not result. Neither would applicants' invention as presently recited in the amended claims result if the acrylic polymeric layer of Schissel et al. were substituted for the UV containing acrylic polymeric layer of Roche et al. for the reason that applicants' invention in fact affixes a second or protective shield layer of a transparent multipolymer film to the base Silverlux material of Roche et al.

Accordingly, the rejection of claim 12-13, 15-18, 19-20 and 22 over Roche et al. in view of Schissel et al. cannot be reconciled under the auspices of 35 USC §103(a).

Claims 14 and 21 were rejected as being unpatentable over Roche et al. and Schissel et al. further in view of Tolliver et al. under 35 USC 103(a).

Applicants respectfully traverse this rejection and request reconsideration for the

following reasons.

Roche et al. and Schissel et al. have been discussed at length above.

A review of Tolliver et al. shows that it is non-related art in that it disclose cellular, or encapsulated element retroreflective sheeting that is resistant to degradation by agents in the substrate to which the sheeting is applied. No where in this reference is there any connection or relatedness to silver reflective mirrors – let alone silver reflective mirrors employed in solar reflectors. As such, Tolliver et al. is insufficient to compensate for the deficiencies mentioned in connection with the combination of Roche et al. and Schissel – despite the fact that UV absorbers may be utilized in the retroreflective sheeting of Tollver et al. There would be no incentive for or reason why a skilled person in the art having Roche et al. and Schissel before him, would want to utilize a second or protective shield layer that includes UV absorbers to improve the Roche et al. silver reflective layer – particularly since Roche et al. alone or in combination with Schissel fail to indicate a problem with inability to achieve undiminished or near 100% spectral reflectance for extended times in tandem with, improved resistance to abrasion, weathering and ultraviolet degradation.

Withdrawal of the rejection is respectfully requested.

The accompanying Affidavit of unexpected results from co-inventors Randy Gee and Gary Jorgensen clearly demonstrate superior and unexpected results in solar weighted hemispherical reflectance of the silver mirror of the present invention compared to that of the Silverlux silver mirror construction of Roche et al. , in that the silver mirror construction of Roche et al. deteriorated significantly after two years upon total UV dose MJ/m2 of about 600, whereas the silver mirror construction of the present invention even after 5 years upon exposure to a total UV dose in excess of about 1700 MJ/$m^2$ maintained its initial solar weighed

hemispherical reflectance.

Likewise, as can be seen in FIG. B of the Affidavit, the resistance to moisture induced delamination of the present invention was beyond 60 days, whereas that of ECP-305 which is a silvered polymethylmethacrylate film having a thickness of approximately 3.5 mils of the 3M company experienced total delamination prior to 30 days of water exposure time.

It is respectfully requested that the forgoing be taken into consideration before the application is taken up for examination on the merits.

Respectfully submitted,

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